

the spending profile of large investment projects. Reviews of the overall effectiveness of programs, or of the management gains from administrative changes within programs, are available to guide policy formation only sporadically, and only as a result of special requests.

Thus, significant opportunities are available to the Congress for improving and making routine the information needed in deciding appropriate amounts and types of spending on different goals. Similarly, information could be provided for overseeing the effectiveness of current policies and practices. Possible management changes could fall into three different categories:

- o Broadening the context of budget requests to that of a development plan,
- o Using agency reports to examine the past effectiveness of policies, and
- o Altering the format of budget requests to require consistent use of evaluation parameters.

Adopting any of these policies or combining several would encourage federal agencies to make better use of analytic methods for monitoring and relaying information about the programs they manage. The reports to be required would be specific, budget-oriented studies. They would, however, be distinct from those in common use now in that they would explain and justify spending requests in relation to program goals.

Sector Planning

To provide a more informative context for legislative consideration of requests, the Congress could require agencies to prepare "sector development" plans. These would set out the long-term goals of individual infrastructure programs, how a current plan aspires to achieve them, by when, and at what cost.

An example of considerable success with this approach is readily found in the Interstate Highway System's construction program. On the basis of the network mapped out during the 1940s, the construction plan adopted in 1956 included the other elements of the strategy needed to realize its objectives. First, consideration of the implementation capacity for the (then-to-be) 41,000-mile network led to a 15-year construction period, with a "half-way" target set at the end of 1964 and completion planned for 1972.

Second, financing arrangements were carefully devised. A federal commitment for the entire program was established through a trust fund offering 90 percent of construction costs to states; at the end of 15 years, the trust fund was to expire. Meanwhile, taxes were enacted for the duration of the trust fund to finance construction.

This plan allowed the Congress to monitor progress and modify arrangements as needed. Swift action to increase revenues averted financial crises for the trust fund in 1959 and 1960, when the initial cost estimate proved too low. Following a cost allocation study, action was again taken in 1961, this time adjusting tax rates to distribute the burden more fairly among users. With the aid of financing changes, construction of the Interstate system proceeded roughly at the pace first planned. By early 1963, a total of 14,600 miles of the system were open to traffic, and construction was under way on another 5,000 miles. Thus, states were well along toward meeting the "half open" target set for late 1964. Tight monitoring continued through the 1960s. By early 1966, work was complete or under way on 94 percent of the network. (Cost increases from inflation and design changes, together with reluctance to raise taxes to finance them in the latter part of the 1960s, however, finally led to postponing the remaining targets for completing the network.)

Thus, by establishing performance standards that meet program targets, sectoral plans improve discipline both for agencies administering programs and for aid recipients. Such plans would provide the Congress with a ready system for measuring progress and assessing possible adjustments. For programs that support continuing investments (such as 4R highway aid), plans could be presented as rolling, three- or five-year programs reflecting current and projected infrastructure conditions and user demands.^{3/} Progress could then be monitored against condition ratings; an example is the serviceability rating now used for highways (see Chapter III). Programs supporting single-purpose investments, on the other hand--such as in air traffic control or wastewater treatment--could be monitored directly against the purposes they serve.

Considering budget requests in the context of sectoral development plans would also give the Congress important information about the extent

3. The federal budget process could be severely burdened if lengthy procedures were required to support each annual cycle. It would be possible, however, to devise realistic three- to five-year evaluation cycles for major programs, with intervening years presented under the present approach. Such cycles for program evaluation could be particularly supportive of the multiyear authorizations now common for federal trust fund programs.

of flexibility in infrastructure programs. Many large projects require appropriations over several years to complete construction. Thus many programs carry forward a high degree of dedication to past decisions. The extent to which a current project approval will commit future resources, and the latitude in existing programs to accommodate new undertakings with or without overall spending increases, could be determined more meaningfully in the context of a sectoral plan. Such plans would project more realistic estimates of future spending than under the present, implicit assumption that current-services spending levels will continue unchanged unless policy is revised. Indeed, changes from current spending levels might be needed to achieve policy objectives.

But plans are difficult to change. Though planning reduces the chances of mistakenly ignoring or excluding initiatives that further a program's objectives (or of including unneeded undertakings), it also raises difficulties for incorporating changes found later in the planning process to be beneficial.^{4/} Planning must balance being so flexible that consistent purpose is lacking; it must also balance being so rigid that needed changes cannot be agreed on among plan sponsors. Further, to be effective, sectoral plans must count on actions on the part of states and localities. States may be less receptive to federal monitoring on general programs than on, say, Interstate highway construction, because of the latter's federal nature and sizable state benefits. Targeting in other programs has been less successful. Communities nationwide, for example, circumvented the intentions under the Urban Development Action Grants program to aid economically distressed areas-- 80 percent of all cities applying, or more than 2,200 in all qualified as eligible for aid. In all cases, substantial intergovernmental agreement on plan goals and means would be needed to make sectoral planning workable.

Ex Post Evaluations from Program Managers

Program reevaluation that looked at general groups of projects or at types of financing arrangements could provide advice on how well management was performing and could alert the Congress to any constraints impeding

4. As discussed in Chapter III, for example, planners found difficulties in adopting a scheme for bus improvements even though they found it offered greater benefits than the rail scheme originally set up for evaluation; the very large lists of water resources projects illustrate the difficulties of changing plans in that sector.

improvements. World Bank practice offers one example of the kind of *ex post*, or after-the-fact, reporting that could prove useful. The Bank conducts two retrospective reviews of each project it helps to finance. The first is conducted by project staff of the Bank or its borrower, and the second by an independent group. The reviews serve two broad purposes. First, since they are to be held accountable, project planners tend to be less overoptimistic. Second, through an annual synthesis of audits in each general sector, broad classes of project management or design adjustments are identified to help shape future projects.

No U.S. infrastructure agency, however, regularly reports to the Congress on the effectiveness either of policy administration or of changes that would enhance infrastructure management. In the U.S. federal environment, similar project-by-project audits would probably not be feasible, largely because the selection and management of projects is performed in the states. Those few status reports presented tend to concentrate on current physical conditions and to summarize past and future spending options. Such policy reviews as are done are rarely carried forward to support changes in budget requests. Proposals to change policies come more often from outside the agencies than from the administrators most familiar with the management of the programs.

In the course of their ordinary work, many agencies do obtain information on the effectiveness of certain policy approaches. Some comes from contacts with state counterparts; state complaints about the cost-increasing effects of federal highway design standards, for example, are widely reported. More comes from special studies financed under a program itself, such as the Department of Transportation's Technology Sharing program.^{5/} Reviews of program effectiveness, extended by a Congressional requirement to formal reevaluation of the program overall, could uncover management changes that would improve the efficiency and responsiveness of infrastructure programs.

Federal managers might regard the reevaluation process as divisive. Further, staff closely involved in program administration might have difficulty in making objective reassessments of the program's performance. On the other hand, much would be lost by assigning the review process to an outside body, whose findings could then be debated or negotiated with the program agency under scrutiny.

5. This program finances and distributes studies and reports on different management, planning, engineering, and operational practices in transportation.

Applying Consistent Evaluation Parameters

The use of consistent evaluation parameters for all agencies would greatly assist the task of making agency budget requests more informative for infrastructure management. Federally supported statements of environmental impacts, analyses of alternative transit proposals, and justifications for water resources projects would all offer discounted life-cycle benefits and costs to compare against unevaluated environmental or social impacts. All agencies would apply to their projects a discount rate reflecting expected long-term borrowing costs (see Chapter III). Looking toward a longer-term goal, all agencies could be required to present comparable information for all capital spending on either a program or project level, whichever one was appropriate.

Rather than devise some uniform presentation for all agencies, use of consistent parameters would require that each agency stay abreast of developing evaluation methods and their applications in the agency's technical field. (Consistency generally does not imply standardized values for most parameters.) Other than the discount rate and the life-cycle approach, values for similar impact measures in different projects or systems would probably differ. Behavioral studies have shown, for example, different values for travel time savings, depending on purpose or journey, mode, and journey stage, and reflecting the different importance travelers place on time spent waiting or traveling under various circumstances.^{6/} The effects of traffic noise and the wishes of localities to suppress or divert it, similarly, are one thing for highways and another for airports. In requiring consistent evaluations, therefore, the Congress would simply have to specify that agencies use the expected federal borrowing rate for discounting and follow the best available practices to evaluate lifetime outcomes for project and program proposals. The purely technical task of determining appropriate methods and parameters for other elements would remain within federal agencies.

Two risks attend encouraging agencies to present evaluation results to support budget requests--agency inertia and excessive zeal. To equip themselves to conduct evaluations, many agencies would have to invest in significant personnel adjustments. Avoiding delays would require vigilance in supervising the changes, and perhaps some incentives for early adoption of analytic methods. At the other end of the scale, adopting too stringent standards for project studies could markedly inflate the cost of budget preparation. Already, the formal procedures for preparing Environmental

6. Such evaluations can be important in transport evaluations.

Impact Statements or Alternatives Analyses are formidable, but their impact on budget choices (as discussed in Chapter III) is not always commensurately beneficial. Planning guidelines for both the Corps of Engineers and the Bureau of Reclamation indicate a four- to five-year duration for feasibility and appraisal studies.

IMPROVING THE INCENTIVES TO NONFEDERAL MANAGERS

To sharpen the incentives to states and localities to make efficient infrastructure choices, six possible changes in allocation rules or management policies themselves could be considered:

- o Reducing federal aid,
- o Developing "sunset" conditions for some programs,
- o Altering matching shares,
- o Using broader financing categories and block grants,
- o Using innovative financing techniques, and
- o Restricting aid eligibility by performance targets.

The first three areas of possible change rely broadly on the principle that, faced with greater shares of costs, states and localities will make more efficient choices among infrastructure options. The third, fourth, and fifth also incorporate features encouraging greater competition for funding among potential projects--a tactic found to sharpen infrastructure choices.⁷ All of these five strategies aim to improve infrastructure management by encouraging wider searches for and better appraisals of the opportunities available; both are needed to ensure the continuing responsiveness of infrastructure systems to national economic and social purposes. The sixth suggests possible direct federal actions that would encourage the same end by rewarding program agencies that use preferred management practices.

7. As discussed in relation to the transit transfers and substitutes for uncompleted Interstate segments in Chapter II.

Reduce Federal Aid

State and local determination to complete infrastructure projects would exert great influence on the outcome of reduced federal financing. If federal contributions to public investments for infrastructure programs were reduced, states and localities should invest more, not less, to assure the completion of projects. To the extent that states and localities partially substituted federal funds for their own revenues (as discussed in Chapter VI), adjustments in the relative shares of federal *versus* state and local financing might be accommodated without serious interruption of an overall program.

Reduced federal funding would make local agencies more reliant on local budgets for investment and operating resources. This greater local responsibility might well stimulate use of better techniques for priority setting. Local consequences and costs would be reflected in choices of projects consistent with local willingness to pay. Greater management responsibility would tend to direct planners' attention to cost saving options.

A disadvantage of reducing federal shares is that, while management effects are likely to be positive, equity and efficiency issues might arise. Equity concerns stem from a generally more regressive overall tax structure in states and localities (based largely on fixed-rate-per-dollar property or sales taxes) than in the federal system, in which some 70 percent of all tax revenue is collected through progressive levies on income. For state and local infrastructure systems, financing from special user taxes rarely provides reserves for renewal or expansion of assets. The burden of infrastructure financing from state and local sources therefore tends to rest on general taxes, and thus it falls relatively more heavily on less-affluent groups of taxpayers. The Bay Area Rapid Transit system in the San Francisco Bay area, for example, financed all construction until 1973 from bond issues; these were to be repaid from property and sales taxes. A review of the relative burden of bond repayments between 1964 and 1990 estimates payments averaging 0.66 percent of the annual income of a family of four living at the poverty level, and 0.56 percent of the income of a retired couple, compared with a 0.24 percent (or less) of income levy on affluent families.^{8/}

Furthermore, if states and localities were to make up reduced federal spending from tax-exempt borrowing, a hidden (and largely unmanageable)

8. See McDonald & Grefe, Inc., *The Economic and Financial Impacts of BART* (Washington, D.C.: U.S. Department of Transportation and U.S. Department of Housing and Urban Development, April 1979).

subsidy, in the form of uncaptured revenues, would augment the federal costs. Overall federal support for infrastructure could still be lower than under current policy, but nonetheless sizable. A \$100 million 30-year tax-exempt bond, for example, leads to federal tax revenue losses equivalent to \$40 million over the bond's life, which would come to half of a federal grant costing of \$80 million.

A perhaps more important drawback is the possibility that states might tend to disregard harmful spillovers from their projects to residents in other states, or fail to incorporate project features benefiting residents of other jurisdictions. Much federal involvement in infrastructure planning aims to encourage states to invest more than they otherwise would to mitigate adverse effects--say, congestion or pollution clean-up costs--on other localities. The importance of this is mostly in projects with interjurisdictional effects, including transportation and wastewater treatment.

Developing Sunset Conditions for Programs

All policy programs inevitably reach a mature stage at which their missions are complete or nearly so.^{9/} After 160 years, the Corps of Engineers, for example, is finding increasingly few opportunities for improving inland or ocean navigation. With an average pavement rating of "good" or better on all federal-aid highways (except low-density rural and urban collectors), purposes of the long-standing assistance for state and local highway systems might also be regarded as mostly accomplished. Transit bus fleets have also been substantially modernized; they now have an average of eight years in service compared with a planning life of 12 years and a maximum of 20.

Developing "sunset" conditions--that is, establishing expiration dates and/or conditions--for all federal assistance programs would clarify both the federal view of the purposes and permanence of each program, and recipients' expectations of federal aid. Sunset conditions would also ease the transition from outdated to new orientations in program goals, and would enhance any sectoral planning activities of program agencies. Setting a termination date on federal aid for transit system modernization, for example, could be coupled with a new program supporting transit investments that would avoid the expansions of urban road systems made necessary by shrinking transit use in cities. Knowing such sunset conditions, local agencies would be encouraged not to delay providing facilities from their own resources in programs in which they do not meet the cutoff provisions.

9. See Congressional Budget Office, *Public Works Infrastructure*, Chapter I.

States and localities would be encouraged to develop financial support systems for infrastructure initially provided with federal subsidies. As a result, the practice of financing first the investment, then its renewal or replacement (as has become common in federal programs) could be avoided. With an end to federal aid in view, local program administrators might become reluctant to finance cost overruns resulting from poor local planning or inadequate engineering practices.

But sunset provisions for infrastructure programs would complicate Congressional decisionmaking and oversight. Unless derived from pre-set termination dates, they might elicit little more than *pro forma* review. They might also divert agency managers from monitoring progress toward long-term goals toward developing political support for their programs. To date, success in achieving termination on programs slated for it has been rare, but it has been achieved for programs for regulating transport operations, substantially since 1980. The five-year phaseout for federal assistance for construction of wastewater treatment plants proposed in 1985 extends the principle to capital programs.

Altering Matching Shares

Federal aid for the Interstate Highway System now provides 90 percent of costs, but for construction of wastewater treatment plants, just 55 percent. The generosity of federal shares of ongoing operations and maintenance costs also varies greatly. Federal contributions cover 90 percent of major maintenance and rehabilitation of the Interstate system and 75 percent for state and local roads; routine maintenance, however, is funded locally. Operations and maintenance expenditures of the Corps of Engineers and the Coast Guard cover all routine and major maintenance of the inland and ocean navigation systems. Users pay fees to recoup all the operating and maintenance costs of wastewater treatment. These variations are reflected in different life-cycle support from federal sources in different programs. Overall, the effective composite federal share of water resources projects -- computed as the discounted capital and operating costs over the useful life of the assets -- varies from an average of 80 percent for Corps-managed projects to 51 percent for those of the Soil Conservation Service. ^{10/}

Using a composite match reflecting a combination of capital and operating subsidies would avoid distortions arising in differences between

10. See Congressional Budget Office, *Efficient Investments in Water Resources* (August 1983).

federal *versus* state and local preferences for capital and operating solutions, depending on the cost burden each governmental level bears. Using a maximum, rather than a fixed, match would allow states, cities, and counties to distribute subsidies from formula aid according to local priorities. Further, to the same end, federal managers of discretionary aid programs could negotiate cost sharing with recipients. In principle, matching shares negotiated between federal agencies and local project sponsors could tend to focus aid on projects or project components that states are reluctant to fund but that have large beneficial spillovers. Federal aid for such projects, for example, could be provided on more generous terms than projects of more predominantly local interest. Thus, no community would receive automatic subsidies on projects that are larger than needed to align choices with national priorities, nor would it receive less in other areas to achieve the same end.

For wastewater treatment investments, analysis has found that an average federal capital match of about 55 percent encouraged efficiency, but that higher federal cost shares coincided with higher overall costs. The Corps' negotiations on cost sharing for water resources suggest a local willingness to pay between 55 percent and 60 percent of capital costs.

With negotiated matching for infrastructure financing, therefore, a lower average federal capital match than the current 80 percent seems a reasonable expectation. Though the effect of reduced federal shares on substitutions between federal and local infrastructure funding has not been studied, it seems that reduced federal matches would more likely lower federal costs than increase spending significantly.

In the long run, altering federal infrastructure financing to negotiated cost shares that were lifetime composites would tend to lower both federal and total infrastructure costs. It would do so by encouraging both federal and local program managers to favor choices with highest benefits or lowest costs, without regard to the balance of the options' capital and operations cost. The immediate effect, however, would probably simply be a change in the timing of federal and local contributions--with higher local shares early on during construction, and higher federal shares later in operations and maintenance.

Smaller communities or agencies with constrained resources, however, might have difficulties competing against agencies that, from a state-wide or city-wide perspective, can use higher local matches as a leverage for further federal aid. Similarly, financing very large projects, which would cut into resources available for all other programs for perhaps several years, might become relatively unattractive.

Broad Financing Categories and Block Grants

Widening the categories of projects eligible for assistance under any one program, or even broadening categorical aid to block grants for infrastructure, offer opportunities for improving infrastructure management. Except in special cases--such as the provisions cited earlier permitting transfers of Interstate aid to mass transit--recipients of federal aid now have little flexibility to distribute federal assistance among their infrastructure programs. As reported in Chapter II, however, the Interstate transfers and substitutes have generally disciplined priority setting for Interstate highway construction.

Such broadening would follow the outlines of actions made in urban programs during the Nixon Administration (for example, Revenue Sharing and Community Development Block Grants) and suggested for social programs early in the Reagan Administration. Unifying funding sources for infrastructure could be done on a small scale. The 47 programs financed from the Highway Account of the Highway Trust Fund, for instance, could be merged. This would help prevent overspending on state and local systems while the Interstate system deteriorates (as was found to be occurring under separate maintenance programs). Or more ambitiously, all transportation subsidies could be combined into a single transportation block grant administered by recipient states. This might encourage more trade-offs between projects in different modes, as was found beneficial in examining the Interstate transfer and substitute programs. All infrastructure aid could be provided in an omnibus grant, distributed by formulas reflecting the extent and performance of component systems. Minimum performance or eligibility criteria could be specified to guide the distribution of funds below the state level. So broad an approach would extend the principle of wider searches for effective improvement options to include all federally supported programs.

The advantages of broad aid categories lie in the stronger influence of state and local budget making on project selection; all infrastructure agencies would receive resources through local budget processes. States could set priorities and distribute funding after considering all resources available from both federal and local sources.

A disadvantage would be the potential for diverting funds to purposes not related to infrastructure. Now, state funds freed by federal assistance are largely spent on the aided system but on unaided activities. State expenditures for construction and major repair of unaided highway systems have been found to increase by about one dollar for each dollar in federal

grants for primary, secondary, and urban roads.^{11/} This may be because of the relative financial independence of agencies receiving federal aid. With block grant disbursement covering several systems, however, spending might spill over to other programs of lesser federal importance. The CDBG programs, for example, have been much criticized because cities did not confine their project selection to the employment-creating development investments in distressed areas targeted by the categorical programs they superseded.^{12/}

New Financing Mechanisms

A new concept in infrastructure finance is that of an infrastructure revolving fund or bank. At the federal level, two different proposals for revolving loan funds for general infrastructure financing are currently being considered, as well as proposals for a fund to finance wastewater treatment plant construction.^{13/} Several states have established or are well along in planning for similar institutions, some for multipurpose assistance and some targeted for the neediest counties.

The general format involves a fund, capitalized with government contributions, to lend for infrastructure projects. Reimbursements are then lent again for further projects.^{14/} Suggestions for capitalizing the funds have included long-term interest-free loans, federal grants matched by states and localities, earmarked tax revenues and, for the banks, borrowing from capital markets. Loan terms, similarly, vary among proposals, depending on policy choices and the costs of loan funds. Because subsidies are provided through government capital contributions, most proposals being discussed could offer project loan terms better than the rates in the municipal bond market.

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11. See Harry G. Meyers, *Displacement Effects of Federal Grants for the Primary, Secondary and Urban Federal Aid Highway Systems*, Office of Management and Budget Special Studies Division, July 1985.
 12. See, for example, M. Carter McFarland, *Federal Government and Urban Problems: HUD: Successes, Failures, and the Fate of Our Cities* (Boulder, Colorado: Westview Press, 1978).
 13. Proposals for new revolving loan funds for infrastructure are set out in H.R. 1776, H.R. 2818, H.R. 8, and S. 1128 of the 99th Congress.
 14. The broad principles of organizing revolving funds are discussed in CBO Staff Working Paper, "Infrastructure Revolving Funds: A First Review" (May 1985).

Revolving loan funds have several features in common that make them attractive for pursuing management improvements. First, competition for relatively scarce loan funds would likely encourage careful scrutiny of project proposals. Fund administrators, for example, would want assurances that loan repayments could be made. Project planning would therefore have to include financial projections for the completed investments, as well as engineering and technical designs. Second, infrastructure managers using loans to finance their projects would be more likely to pay attention to proper pricing of their services, and might be encouraged to set up reserves for the renewal of their assets.

Loan repayments could also reduce the federal cost shares for any volume of project investments. A wastewater revolving fund wholly capitalized from federal sources, for example, could offer 20-year loans at 5 percent interest for a net long-term federal cost share of 40 percent, compared with 55 percent under the current construction grants program. Interest-free loans with 20-year terms for infrastructure could be provided at a 60 percent federal match, compared with the present average 80 percent capital share for federal grants. Moreover, to the extent that repayments were made from user charges, this would present an equitable way to lower federal matches or reduce federal participation in programs.

Disadvantages in revolving funds lie in the risks of default by borrowers and in the influence of subsidies on project choices. Defaults, of course, reduce the resources available for both good and bad projects. A single major default, or simply a poor record of collecting repayments, can jeopardize the overall financial stability of a fund. Revolving funds also exhibit the disadvantages of earmarking characterized by trust funds (see Chapter VI), hampering efforts to redirect surplus balances or revenues not needed for the programs financed.

Moreover, to be effective in improving infrastructure management significantly, such funds would have to finance most, if not all, of relevant investments. More creditworthy borrowers might prefer to borrow directly from capital markets, since they might have better credit ratings than the fund. Loan portfolios of the revolving funds might therefore include a large portion of risky borrowers, which would increase the chances of the funds having to make repeated calls for government aid for recapitalization. For funds set up to serve as new infrastructure financing sources, this could be especially relevant. Agencies substituting revolving loan funds for capital grants would receive lower subsidies than are received now, and the incentives for careful project design and selection would be heightened. Agencies with poor projects and poor credit ratings, however, would also tend to be attracted to revolving funds, since the funds would usually be able to offer

(average) financing terms at below-market rates by averaging their riskiness with more creditworthy projects. Unless strict risk assessment and repayment policies were enforced, this would tend to erode the overall creditworthiness of revolving funds.

Focusing Aid

To promote better management practices, federal aid could be dispensed conditionally. For example, aid could be "tranching," or parceled out, in different priority groupings. Accordingly, financing could go first to those rehabilitation or renewal projects not adding to capacity or to those expansion projects for which overall productivity for the existing sections of the system reaches efficient levels, since these projects would tend to show the highest returns. Priority financing for such projects would help ensure that rehabilitation and expansion options were considered during project design, as well as operational and management options for productivity gains. Other projects would then be financed from residual funds. Alternatively, using management criteria, preference could be given to all projects that incorporate elements to extend the useful lives of facilities (including using improved pricing--see Chapter V), or that develop strategies for providing reserves for asset replacement or renewal. Most bus companies modernized with federal assistance, for example, rely on further assistance to replace their renewed fleets as buses reach the ends of their service lives. This perpetual cycle could be avoided if assistance for modernization were tied to conditions ensuring either the accumulation of reserves or changes in pricing policy.

Local infrastructure agencies, however, might resist federal performance criteria as conditions for aid. Nevertheless, performance covenants are common in commercial contracts, and in municipal borrowing for capital projects, financial reserve requirements are typically agreed on with underwriters. Stricter conditioning of federal assistance would encourage agencies to seek efficiency-enhancing practices that would attract preferential aid, resulting in generally better planning and maintenance.

Nationally applicable federal standards would have to be set with care. Standards for operational efficiency cannot be too broad or too rigid to reflect the varying circumstances of different regions. Because of this delicateness, conditioning federal assistance might also lead to a larger supervisory effort on the federal government's part, and to what might be seen as undue interference with local management. As with modified financing, however, the benefits of changes in aid conditions designed to improve infrastructure management rely on stronger state and local budget procedures, rather than on a stronger federal influence.



